



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,966	07/27/2007	David Murray Cross	CB60576	6584

20462

7590

02/23/2009

SMITHKLINE BEECHAM CORPORATION  
CORPORATE INTELLECTUAL PROPERTY-US, UW2220  
P. O. BOX 1539  
KING OF PRUSSIA, PA 19406-0939

EXAMINER

BOATENG, ALEXIS ASIEDUA

ART UNIT

PAPER NUMBER

2838

NOTIFICATION DATE

DELIVERY MODE

02/23/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

US\_cipkop@gsk.com

# Office Action Summary

**Application No.**

10/577,966

**Applicant(s)**

CROSS ET AL.

**Examiner**

Alexis Boateng

**Art Unit**

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 16, 20, and 22 – 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klinger (U.S. 5,561,881) in view of Yang (U.S. 6,437,544).

**Regarding claims 1, 20, and 22 - 25**, Klinger discloses an electrically powered toothbrush comprising a head which supports a bristle carrier, the head being connected to or connectable to a grip handle, the bristle carrier being moveable by an electric motor in the toothbrush to provide a cleaning effect (figure 1).

in combination with a charging unit (figure 1 item 200) which incorporates an electricity supply (figure 1 item 220) comprising one or more replaceable or rechargeable battery cell (figure 1 item 24: it is obvious that power the system receives from an electrical outlet maybe modified to be a rechargeable battery cell, since they are analogous power sources), and having an electrical connection means (figure 1 item 160) connectable to a corresponding connection on the toothbrush to enable electrical connection. Klinger does not disclose wherein incorporating an electric power supply which comprises a capacitor capable of containing sufficient electric charge to drive the motor for a tooth

cleaning session, nor wherein a connection is established between the capacitor and the charging station, and with which the toothbrush may be connected.

Yang discloses in figure 1 wherein item 105 is a capacitor, super capacitor, or the like used to provide charge to a load. The load device, item 104, uses a rechargeable storage device, item 106, to drive the load. It is obvious that the rechargeable device may be a super capacitor as it is well known that a super capacitor is a rechargeable device. Additionally, it would have been obvious to rearrange the rechargeable devices, the super capacitor and the battery, so that device is provided with more power, since it has been held that rearranging parts of an invention involves on routine skill in the art. *In re Japikse*, 86 USPQ 70.

**Regarding claims 2 - 14**, Klinger in view of Yang discloses wherein the capacitor provides electric power sufficient to drive the motor for a tooth cleaning session. It is obvious that the capacitor in the Yang system may substitute the battery in figure 1 item 110 of the Klinger system, which drives the motor of the toothbrush. Klinger nor Yang discloses wherein the tooth cleaning session lasts for two minutes or more, a specific capacity and output voltage. I would have been obvious to a person of ordinary skill in the art to modify the Klinger and Yang system with a capacitor with a specific capacity and output voltage that adheres to the user's specifics. *In Re Bosch*, 617 F.2d 272, 205 USPQ.

**Regarding claim 15**, Klinger does not disclose wherein multiple cells are used within the system. It would have been obvious to a person of ordinary skill in the

art to modify the Klinger system with multiple cells so that additional charge is stored and provided for the system, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

**Regarding claim 16**, Klinger discloses wherein the charging unit or toothbrush includes a resistor in series with the replaceable or rechargeable cells when they deliver V1 (column 5 line 62 – column 6 lines 28).

3. Claims 17 – 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klinger (U.S. 5,561,881) in view of Yang (U.S. 6,437,544) as applied to claim 1 and in further view of Lundell (U.S. 6,140,802).

**Regarding claims 17 – 19**, Klinger and Yang do not disclose the system as claimed. Lundell discloses in column 3 lines 30 – 53 wherein the charging unit is constructed to derive a charging and boost voltages to V1 and V2 from the supply. Lundell discloses different levels to which the voltage is increased which may be V1 and V2 levels. Figure 5 discloses wherein in step 106 the system is timed out if the toothbrush is not used. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Klinger and Yang system with the Lundell system so that optimum power is provided.

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klinger (U.S. 5,561,881) in view of Yang (U.S. 6,437,544) as applied to claim 21 and in further view of Pai (U.S. 5,721,273).

**Regarding claim 21**, Yang and Klinger do not disclose the invention as claimed.

Pai discloses in column 3 lines 55 – 57 wherein a Nickel cadmium battery may be used. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Yang and Klinger system to provide optimum charging.

### ***Response to Arguments***

5. Applicant's arguments filed 12/05/08 have been fully considered but they are not persuasive. **Regarding claim 1**, the applicant argues that the Klinger reference does not disclose an electrical toothbrush in combination with a charging unit to which the toothbrush may be connected for charging. Klinger discloses in column 4 lines 62 – column 5 lines 39 wherein the toothbrush may be recharged by the charging unit. Additionally, Klinger discloses wherein the power supplies may be modified to be different types of power sources, which includes rechargeable batteries and capacitors. The applicant argues that the Yang reference does not disclose usage for day to day appliances usable over long periods of time. It is known and obvious that capacitors can operate as batteries when they are disconnected from the charging source and would be used for day to day use of various appliances. **Regarding claims 15 – 17**, the applicant argues that the Lundell system does not disclose a system in which the charging voltage supplied to the toothbrush is changed. The Lundell system provides a system wherein the battery voltage, or power supply, is adjusted to maintain adequate battery output as disclosed in column 5 lines 23 – 53. **Regarding claim 21**, the

applicant argues that there is no suggestion to combine the Pai reference with the Klinger reference and the Yang reference because the Pai reference uses nickel-cadmium batteries. The Pai reference provides an electric toothbrush system wherein the recharging portion may be modified with nickel-cadmium batteries.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexis Boateng whose telephone number is (571) 272-5979. The examiner can normally be reached on 8:30 am - 6:00 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm I. Ullah can be reached on (571) 272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AB  
//Edward Tso//  
Primary Examiner, Art Unit 2838